

SK
313
R32
1912
Birds

GAME BIRDS

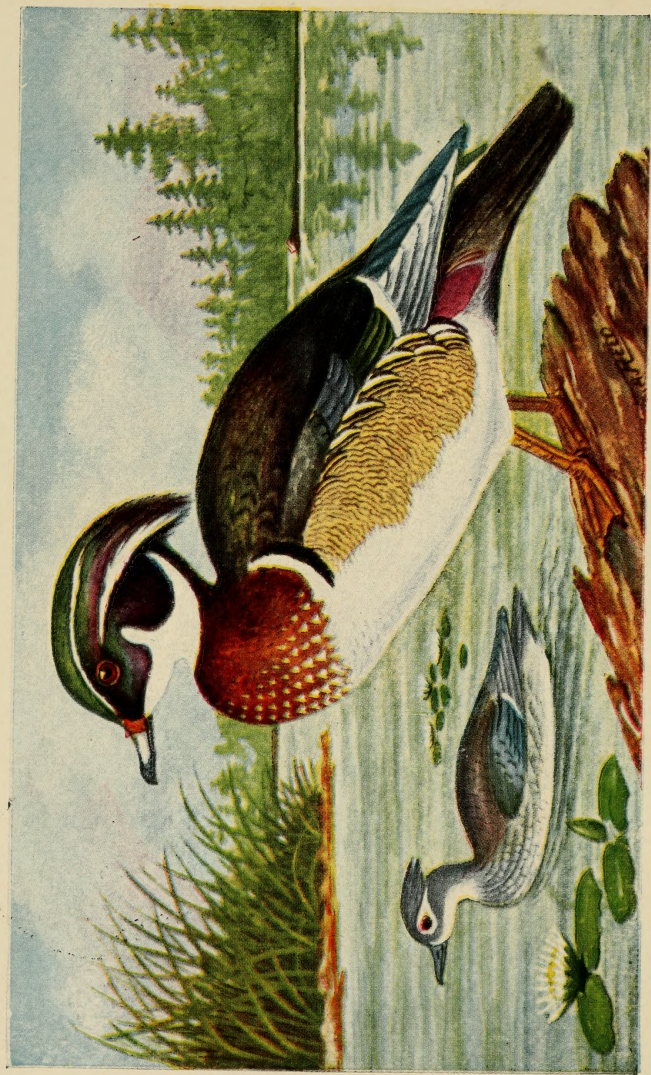












WOOD DUCK

Most beautiful of all Water Fowl

313
R32
1912
Birds

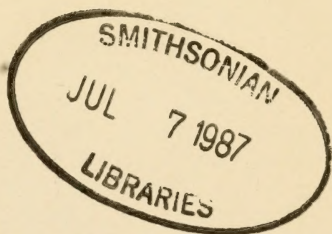
AMERICAN GAME BIRDS

BY

Albert
CHESTER A. REED, S.B.

Author of "Land Birds," "Water Birds," "North American Birds' Eggs,"
"Camera Studies of Wild Birds," etc.

ILLUSTRATING MORE THAN ONE HUNDRED SPECIES
IN NATURAL COLORS



CHARLES K. REED

WORCESTER, MASS.

1912

COPYRIGHTED, 1912, BY
CHARLES K. REED
WORCESTER, MASS.

ENGRAVED AND PRINTED BY
QUADRI-COLOR CO., NEW YORK

AMERICAN GAME BIRDS

This book is the result of repeated requests from sportsmen in the last few years for a convenient handbook illustrative and descriptive of the game birds. Although there are hundreds, or perhaps thousands, of volumes dealing with hunting the various species of wild fowl, we believe "American Game Birds" to be the first to illustrate practically all of them with accurately colored plates.

Circumstances permitting, nearly every man or boy capable of holding a gun is, or sometime will be, a sportsman. Many sportsmen are expert ornithologists, well acquainted with the names and habits of most of the birds, but the great majority are not and often secure game which they or their friends are unable to name. "American Game Birds," according to an old sportsman who has hunted all kinds of game in all parts of our country, will be a boon to sportsmen of all calibers, for "the novice has got to have it to know what he is shooting, the man familiar with the birds of his locality will want it in order to see what his brother sportsmen are shooting in other parts of the country, and the old-timer will literally renew his youth as he turns over the pages and sees portraits of his old bird acquaintances and recalls the exact places and circumstances of their former capture."

A book with this title might very properly commence with the most popular game birds and continue down the list to the least popular ones, but if we placed the Ruffed Grouse or the Bob-white in the van, some sportsman who believes there is no game but ducks would be sure to be offended. Since there is a natural order of birds that is adopted by scientists the world over, we have taken up our so-called game birds in this natural order, an arrangement that brings the Mergansers or "Fish Ducks" to the fore, even though they are not desirable as an article of food. We have included all the ducks, even though many of them are not fit to eat, and also all the sandpipers, even though many of them are so tiny that none but the veriest novice would intentionally shoot them, for the reason that they are very commonly seen, can be legally shot, and many are inadvertently taken before their identity is discovered.

CHESTER A. REED.

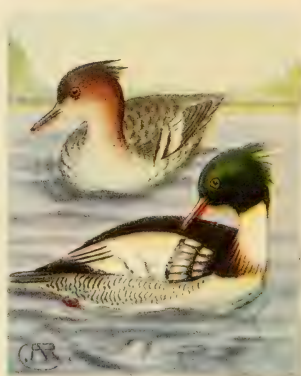
Worcester, Mass., August, 1912.

AMERICAN GAME BIRDS

MERGANSERS (*Mergus americanus*) are large ducks of unusual beauty of plumage, but otherwise of comparatively little interest to sportsmen, since their flesh is wholly unfit for the table. Their food consists very extensively of fish, a diet that gives a very strong and rank flavor to the flesh of any bird. That they are excellent divers and swimmers is amply proven by the fact that they pursue and catch fish under water. The bill of the Merganser is quite slender and cylindrical, the edges being provided with sharp saw-teeth to enable them to firmly hold their finny prey.

This species, although often frequenting salt water, is very partial to fresh-water lakes, creeks and rivers. They remain in such places during winter, just as far north as the water remains open. They are known by many local names, among the most common of which may be mentioned "Goosander," "Saw-bill," "Buff-breasted Sheldrake," "Fishing Duck" and "Weazer." It is well to note some of the major differences between this species and the next. The male Merganser has a somewhat puffy head, but no distinct crest as does the following. The salmon-colored breast and under parts are unmarked. The females are more confusing, for both species have crests, but that of the present is heavier and browner. An infallible mark of distinction is the nostril, which in this species is just midway between the eye and tip of bill, while in the next it is located nearer the eye. The Merganser occurs throughout North America, breeding locally from the Northern States, northward. The eggs are laid in hollow trees or, in the far North, usually on the ground.

RED-BREASTED MERGANSERS (*Mergus serrator*) share most of the local names with the preceding species. They are, however, more commonly found on salt than on fresh water. They are cosmopolitan in distribution, nesting on the ground in Canada and spending the winter throughout the United States, but most abundantly on the coasts.



MERGANSER (♀, ♂)
RED-BREASTED MERGANSER
(♀, ♂)



HOODED MERGANSER (♂, ♀)
MALLARD (♂, ♀)

HOODED MERGANSER (*Lophodytes cucullatus*). This smallest of the Sheldrakes has a magnificent circular, flat, fan-shaped crest which can be opened or shut to express the emotions of the owner. Although quite universally known by its right name, this species is sometimes spoken of as the "Hairy-head," "Little, Wood, Pond or Summer Sheldrake." They at times live chiefly upon small fish, but at some seasons in some localities feed extensively upon mollusks and roots and their flesh then is quite palatable.

Hooded Mergansers are exclusively North American, breeding throughout the United States and Canada, but quite locally. Their half dozen or more buff-colored eggs are laid on a soft bed of grass and down, in cavities of trees, generally along the banks of streams or lakes. These birds are exceedingly active on the surface of the water, and more so below, pursuing fish with the greatest agility, using both the wings and feet to propel them through the water.

MALLARD (*Anas platyrhynchos*). Probably the most valuable of all wild water fowl, for they are easily domesticated and are the source from which some of our best barnyard ducks have descended. As usual, other names are often associated with them, some persons knowing them only as "Green-

heads," others as "Wild Ducks," while to the French they are the "Canard français" or "French Duck." They are found throughout most of the Northern Hemisphere and are very highly esteemed as table birds everywhere. They feed almost wholly upon vegetable matter, such as tender roots of aquatic plants, which they get from the bottoms of ponds in shallow water, by "tipping up" and not by diving, and upon various grains and grasses in meadows or cultivated fields.

During early summer, while the female is sitting upon her greenish-buff eggs in some remote part of the meadow, the drake moults to a plumage similar to that of his mate, only to again assume his handsome dress in September.

BLACK DUCK (*Anas rubripes*). This species is in many respects quite similar to the Mallard, in fact it is often termed "Black Mallard" or "Dusky Duck." The sexes are quite similar in plumage, the female being only a little lighter colored. The female Mallard sometimes bears considerable resemblance to the Black Duck, but always shows the two white bands bordering the greenish-blue speculum. The present species, too, has white linings to the wings, which are very conspicuous during flight. Black Ducks are found in eastern North America, nesting in Canada and the Northern States, where to a large extent they replace Mallards, and wintering south to the Gulf States.

The nesting and feeding habits of Black Ducks and Mallards are almost identical. They feed chiefly after dark, in marshes or shallow water, where they can easily reach the bottom. Although usually they are very watchful and wary, from time to time they forget caution and the marshes resound with their loud quacking.

FLORIDA DUCKS (*Anas fulvigula*) are quite like the Black Duck, but the coloration is a trifle more buffy and the throat has less streaking. The feathers on the flanks and underparts are also somewhat differently patterned. They are found only in Florida.

The **MOTTLED DUCK** (*Anas fulvigula maculosa*), which is found in southern Texas, is quite spotted on the under parts.

GADWALL (*Chaulelasmus streperus*). These birds, which measure about 21 inches in length, are cosmopolitan in distribution, but in America are nowhere as abundant as the following species. They frequent marshes about fresh-water lakes and ponds, breeding chiefly in the interior and western America and being only casually found during migrations on the Atlantic coast north of Chesapeake Bay. Compared to other species, the drake is rather poorly plumaged, the black, white and chestnut on the wings only serving to break the monotony of the general coloring.



BLACK DUCK
GADWALL



BALDPATE (♀, ♂)
GREEN-WINGED TEAL

BALDPATES (*Mareca americana*), that is, the drakes, are quite handsomely plumaged, as our picture shows. The name is bestowed because of the white crown, similarly as the Bald Eagle is so named, even though it is not in any respect bald. Some sportsmen prefer to term this species the "Widgeon," but since that is the name of the common European bird, the present one is better for this species.

These birds are found, in the proper seasons, throughout North America, breeding chiefly in the interior, from the Arctic Circle south as far as Texas. They winter in the southern half of the United States and, while abundant on the South Atlantic coast, occur on the New England coast only casually during migrations.

They are quite highly esteemed as table birds, for their food is almost wholly of vegetable matter. They delight in accompanying flocks of Canvasbacks, Redheads or other deep-diving ducks, as they can feed upon the roots which, loosened by these birds, float to the surface.

EUROPEAN WIDGEONS (*Mareca penelope*) are of the same size as the last species, about 20 inches in length, and similar in plumage except for the head, which is rusty brown with a buff-colored crown. This is a common Old World species that quite often

occurs in eastern North America.

GREEN-WINGED TEAL (*Nettion carolinense*). Although the smallest of our ducks, measuring but 14 inches in length, this species, which is sometimes called "Winter Teal" because it migrates later in fall and earlier in spring than the next, is very attractive both in plumage and actions. It nests on the ground, chiefly north of the United States border, but locally south to Colorado.

They are very active, swift of flight, capable of diving deep and of springing from the water in full flight.



European Widgeon

BLUE-WINGED TEAL (*Querquedula discors*), which measure about one inch longer than the preceding species, are quite commonly termed "Summer Teal," as they migrate earlier in fall and later in spring than the green-winged variety. They are found in North America, chiefly east of the Rocky Mountains, breeding in the Northern States and southern Canada and wintering from Maryland and Illinois south as far as Brazil and Chile.

Among sportsmen, this species has the reputation of being one of the swiftest ducks in flight, the most wild and impossible claims of speed being mentioned, even up to two hundred miles per hour. Careful observations by competent men have amply proven that this or no other duck can fly at a rate of more than sixty miles per hour.

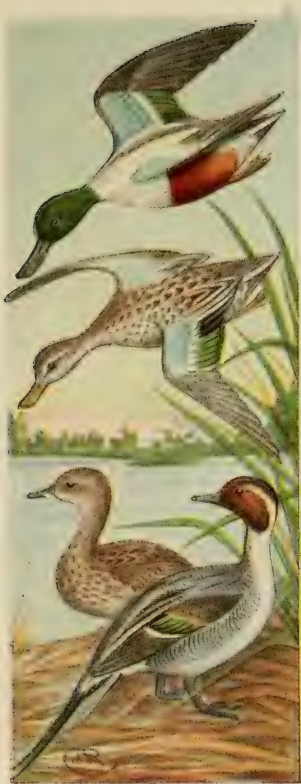
In autumn they feed upon wild rice, as well as other tender plants and insects, becoming quite fat and very toothsome, although of small size. They are never very shy and come readily to decoys, settling among them with the greatest confidence. They walk very gracefully and easily, and swim swiftly and with much buoyancy, usually keeping close together, the same as Green-wings do.

Their nests are on the ground, in patches or tussocks of grass in meadows, or along the borders of streams, ponds or swamps. They are made of grass and weeds, thickly lined with feathers and down; six to twelve greenish-buff eggs constitute the full setting.

CINNAMON TEAL (*Querquedula cyanoptera*) are abundant on the Pacific coast, not uncommon in states west of the Mississippi and of casual occurrence in eastern states. They are found even more abundantly and more widely distributed in South America. Like the other teal, they prefer fresh-water marshes and ponds and are seldom found on open salt water. Like all very active ducks, they run about meadows and catch a great many grasshoppers. This diet, together with the grain and tender plants they devour, makes their flesh very palatable.



BLUE-WINGED TEAL (♂, ♀)
CINNAMON TEAL (♂, ♀)



SHOVELLER (♂, ♀)

PINTAIL (♀, ♂)

SHOVELLER (*Spatula clypeata*). These ducks are very easily identified, not only by their unusual and attractive plumage, but because of the comparatively large size of their bills, which are much larger than those of any other species in proportion to the size of the bird. Shovellers, "Broad-bills" or "Spoonbills," as they are perhaps more often termed, have a very wide distribution, being found in almost all parts of the Northern Hemisphere. In our country, they breed locally in the western and central states and throughout Canada.

Shovellers frequent fresh-water ponds and lakes, especially where there are shallow bottoms well covered with vegetation. They feed by "tipping-up," where they can reach bottom, sifting the mud through the very prominent strainers on the sides of the bill, and eating the many insects and small mollusks so obtained.

Their flight is quite swift and often a little erratic. They appear larger than they really are, for they have considerable spread and a large head and bill to give an appearance of size that does not exist in reality. Their flesh is quite desirable and they are often shot from blinds over decoys to which they come very readily and with little fear.

PINTAILS (*Dafila acuta*), "Sprig-tails" or "Spike-tails," as they are about equally

often called, are quite unusual among ducks and easily identified because they have such long slender necks and pointed tails, although the latter feature is shared with the Old-squaw. This also is a cosmopolitan species and is found in both the Old World and the New. According to E. W. Nelson, who has had unusual opportunities of watching their actions during the mating seasons, they are very playful, diving into the water when in full flight and emerging also in flight, chasing one another about and occasionally mounting high in the air to descend on set wings. They nest in Canada and south to interior United States. In winter they are usually seen in small flocks of their own kind, and seldom with other species.

WOOD DUCK (*Aix sponsa*). Nearly everyone is agreed that Wood Ducks are the most beautiful of any species found in this or any other country. The exquisitely colored and crested head, the iridescent glossy back and the delicately marked flanks combine to produce an effect that cannot be surpassed. Even the female is more beautiful than that of other species.

Beauty proves fatal to them, however, for they are hunted, not only for sport and food, but for their feathers, some of which are used in fly-tying. Wood Ducks are oft-times called "Summer Ducks" because they are a warm-weather species and sometimes termed "Bridal Ducks" because of their beauty which is associated with bridal robes.

They frequent wooded lakes or creeks, where they occasionally perch in the trees, but more often are found along the shores or floating among the grasses of lagoons. Their note, which is sometimes uttered as they take wing, is a single sharply whistled "oeeck." They are of local occurrence and breed throughout the United States and southern Canada, but they are yearly becoming more scarce in all portions of their range. Their nests are in the cavities of trees, but not necessarily near the water's edge. The ducklings either flutter down the tree trunk or are carried to the ground in the bill of the mother.

REDHEAD (*Marila americana*). This name is so appropriate that it is known by few others, one of which is "American Pochard." Redheads bear superficial resemblance to Canvasbacks and the two are sometimes confused by novices; the differences are apparent from the pictures, and are pointed out in the next description. Redheads breed in central and western United States and Canada and are abundant on the South Atlantic coast during migrations and in winter. They are classed as one of the sea ducks, because they are able to dive to great depths, but are found equally common on fresh water. Their flesh is excellent after suitable feeding.



WOOD DUCK (♂, ♀)

REDHEAD (♀, ♂)



CANVASBACK (♀, ♂)

SCAUP DUCK (♂, ♀)

CANVASBACK (*Marila valisneria*). This species ranges over the whole of North America, but is quite rare on the Atlantic coast north of Long Island. They breed in the interior and northwestern United States and Canada, making their nests on the ground on the edges of sloughs or marshes, or sometimes even piling up rushes in shallow water to form a foundation. They formerly wintered very abundantly in the Chesapeake and North Carolina waters, but have been hunted so relentlessly that only fewer and smaller flocks now visit there.

After feeding for several weeks on wild rice, wild celery and the tender shoots of valisneria, Canvasbacks become the most toothsome of ducks, although Redheads approach them very closely.

This and the last species differ in the following respects, as may be seen by referring to their respective pictures. The bill of the Canvasback is black and high at the base, while that of the Redhead is bluish, with a black nail, and is ordinary duck shape. The iris of this species is red, that of the last is yellow. The back of the Canvasback is very much lighter and more finely barred than that of Redhead. The females resemble each other closely, but can always be placed on account of the differently shaped bills. Both are quite wary, but come to and

are shot over decoys. Their flight is perhaps the swiftest of that of any of the large ducks. They are one of the deep-diving ducks, a subfamily characterized by having a flap on the hind toe, although how this can prove of any assistance to them is difficult to understand.

SCAUP DUCK (*Marila marila*). This is the larger of the two species that are very commonly known as "Bluebills" and "Blackheads," and less often as "Broadbills" and "Raft Ducks." This species measures 19 inches in length, while the next is about 17, and the head is glossed with greenish, while that of the Lesser Scaup has purplish reflections. This species breeds in interior Canada and winters throughout the United States.

LESSER SCAUP DUCKS (*Marila af-
finis*) winter most abundantly in the in-
terior of the United States, while the last spe-
cies is the most commonly found on the
coasts during winter. They nest chiefly in
Arctic America, but casually south to Colo-
rado and Iowa, the nest being on the ground
in or close to marshes, as is usual with most
ducks. They appear in numbers in the
States late in fall and are, during winter, one
of our most common species. A few of them
pass the severe weather just as far north as
open water can be found. They usually are
found in quite large flocks; and as several
flocks often unite and float about in the mid-
dle of lakes or ponds, they have become
known locally as "Raft Ducks."

They dive in very deep water to pull up
grasses or pick up mollusks from the bottom.
Owing to their watermanship, wounded
Scaups are difficult birds to secure, for, other
means of escape failing, they will dive and
hang to grass at the bottom, drowning
themselves rather than be captured; first,
however, they will attempt to escape discov-
ery by immersing the body and leaving just
the bill protruding, a ruse that usually
works successfully.

The females of the two Scaups are so
nearly alike that only the matter of size can
determine them with certainty.

RING-NECKED DUCK (*Marila collaris*). This species, which is of the
same size as the last, is not apparently abundant anywhere, but, during the
proper seasons, occurs throughout North America in small flocks or individ-
uals in company with Scaups. The name Ring-necked Duck is owing to the
narrow collar or band of chestnut feathers separating the purplish-black head
from the intense black of the breast and back. They are locally known as
"Ringbills," for the reason that the black bill has a bluish band across the
middle. The female is quite like that of the Scaup, but can always be distin-
guished by the prominent eye-ring. Notice, too, that the male has a tiny
white spot on the chin.



LESSER SCAUP DUCK
RING-NECKED DUCK (♀, ♂)



GOLDEN-EYE (♀, ♂)
BARROW GOLDEN-EYE

GOLDEN-EYE (*Clangula clangula americana*). A handsome hardy species, length 19 inches, that occurs commonly throughout North America at different seasons, breeding commonly in northern Canada and south locally to northern United States, and wintering throughout the United States. At times we find them in the Northern States when the only open water is an occasional air hole, through which they are able to dive to the bottom and secure their food of plant, mollusks or fish. Golden-eyes are among the most active of all ducks. They spring from the surface of the water with the greatest of ease, their rapidly whirring wings producing a whistling sound, during flight, that can be heard even before a flock comes into view; on account of this sound, these birds are almost exclusively known among sportsmen as "Whistlers." Another name applied to them is "Spirit Duck," this because they can disappear so very rapidly under water.

Golden-eyes normally lay their six to ten grayish-green eggs on a bed of down in cavities of trees, but as suitable sites are scarce many of them locate on the ground under concealment of logs, rocks, etc.

BARROW GOLDEN-EYE (*Clangula islandica*). Otherwise known as the "Rocky Mountain Garrot," this species, which differs from the preceding in having a white crescent before the eye in place of a round

spot, having the head glossed with purple instead of blue and in having less white on the wings, is not nearly as abundant as the common Golden-eye. They breed in Canada north of the St. Lawrence and in the Rocky Mountains south to Colorado and winter only to the northern border of the United States. They commonly frequent quite turbulent streams, especially while nesting. The females of the two species of Golden-eyes so closely resemble each other that only the differences in the shapes of the bills can identify them, that of the present species being higher at the base when viewed from the side, and narrower at the tip when viewed from above.

BUFFLEHEAD (*Charitonetta albeola*).

These are handsome little ducks, length 13 or 14 inches, about equaling in size the Green-winged Teal. Neither sex can be confused with any other species owing to their tiny size and very characteristic markings. They are quite frequently known as "Butterballs" because of their small, plump bodies, and as "Spirit Ducks" or "Dippers" because of the extreme speed with which they can disappear under water. In the days of black powder, it was quite difficult to shoot one on the water, but modern weapons of offense give them no warning to dive, yet their bodies are so small and their sight so keen that they are well able to take care of themselves. They breed throughout central and northwestern Canada, laying their eggs on down in cavities of trees near the banks of streams. They are found quite uniformly over the United States in winter. They usually add some fish to their diet, as do the two Golden-eyes, consequently their flesh is rather rank, although they are often eaten.

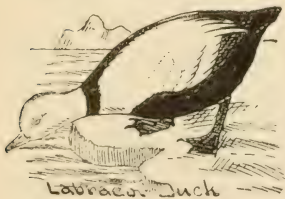
OLD-SQUAW (*Harelda hyemalis*). A species breeding in Arctic America and wintering in great numbers as far south as the Great Lakes and on the coast to North Carolina and southern California. Otherwise known as "Long-tailed Duck," "Old-wife," "South-southerly" and other less common ones, most of which refer to their noisy gabbling. The

summer and winter plumages are quite different, as shown respectively by the bird just diving into the water and the lower one. The male measures up to 23 inches, while the female averages about 18 inches long. Their food consists of shellfish, small fish and insects which they can secure in very deep water. Their flesh is very tough and quite unpalatable.

LABRADOR DUCK (*Camtorhynchus labradorius*), the male of which is shown in the little pen sketch, formerly lived off the North Atlantic coast, but has been extinct since about 1875.



BUFFLEHEAD (♀, ♂)
OLD-SQUAW (SUMMER, ♀,
WINTER)





EIDER (♂, ♀)
PACIFIC EIDER

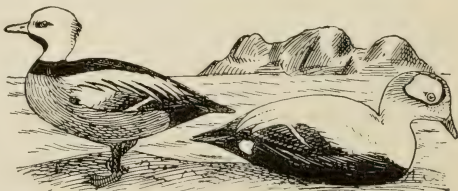
EIDER (*Somateria dresseri*). These very large and handsome ducks, measuring 24 in. in length, live quite extensively upon small fish as well as mollusks and insects; their flesh is consequently tough and very unpalatable, but they are nevertheless valuable birds, for they furnish the eider down of commerce, this being gathered from their nests on northern islands. This species breeds from Maine to Labrador and in the southern half of Hudson Bay. Another species, **NORTHERN EIDER** (*Somateria mollissima borealis*), which differs from this in having the soft basal portion of the bill pointed instead of rounded, breeds farther north and in Greenland. Both species winter south on the coast as far as Massachusetts. Their flight is rather heavy and is usually performed in Indian file.

PACIFIC EIDERS (*Somateria v-nigra*) are plumaged just like the Northern, except that the male has a black V-shaped mark extending back from below the bill. Pacific Eiders are found chiefly on the coasts and islands of the Behring Sea and adjacent portions of the Arctic Ocean.

SPECTACLED EIDERS (*Arctonetta fischeri*) are very locally distributed on coasts of the Behring Sea. The male has a very peculiar formation of short velvety feathers on the head, while the female can easily be

distinguished from other species because the base of the bill is wholly feathered.

SELLER DUCK (*Polysticta stelleri*) is a smaller duck, measuring 17 in. in length. The male, shown in the pen sketch, has a black throat and rusty colored under parts. The female is brownish similar to the Eiders but of course much smaller. These ducks are not uncommon in Behring Sea and adjacent waters.



Steller Duck Spectacled Eider

KING EIDERS (*Somateria spectabilis*) are found throughout the northern parts of the Northern Hemisphere, breeding in Arctic regions and wintering in America, south regularly to the Great Lakes, Long Island and the Aleutian Islands. They are handsome birds, as may be seen from the illustration, having more black in the plumage than the other Eiders and having a very large and prominent frontal process at the base of the bill. The female is slightly grayer than the other species, but can best be identified by the fact that the feathers on the sides of the bill come far short of reaching the nostrils. This seems to be even more exclusively a sea duck than the others and is rarely found inland. It is of about the same size as other Eiders, namely, 22 or 23 in. in length.

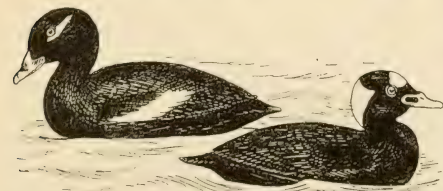
SCOTER (*Oidemia americana*). This is the smallest of the so-called "Sea Coots," being about 18 in. in length. Because of the slightly enlarged, bright yellow, basal portion of the bill, it is very often termed the "Butter-bill." This species and the two following breed abundantly in the northern half of Canada and Alaska, and winter in "rafts" off the Atlantic and Pacific coasts of the United States and on the Great Lakes. They are all excellent divers, feeding in deep water; their flesh is, however, very tough and quite unpalatable, although it is sometimes eaten.

SURF SCOTERS (*Oidemia perspicillata*), the male of which is shown in the pen sketch, are about 20 in. in length. The female is chiefly gray, but has a large spot of white on the cheeks. The bill of the male is quite swollen and colored black, white and orange.

WHITE-WINGED SCOTER (*Oidemia deglandi*), the largest of the Scoters, is 22 in. in length. The male is shown in the pen sketch.



KING EIDER (♂, ♀)
SCOTER (♀, ♂)



White-winged Scoter Surf Scoter



HARLEQUIN DUCK
RUDDY DUCK

HARLEQUIN DUCK (*Histrionicus histrionicus*). A handsome and trim species, although the male is garbed in a clownish manner. Its peculiarities are not confined to plumage, for Harlequins are rather solitary in their habits, while most ducks like company of their own kind.

They breed from the Arctic coast and Greenland south to Newfoundland and British Columbia, and in mountains to Colorado. They frequent, from choice, turbulent streams such as are chosen by Golden-eyes, and most frequently lay their six to eight buffy eggs in feather and down-lined hollows near the banks. In some sections it is also said that they nest in hollow trees. In winter they may be found locally throughout northern United States, but they are most abundant off the coasts from Newfoundland to Massachusetts and from the Aleutian Islands to California.

In Alaska they are said to congregate in large flocks before and after breeding, but most observers in the States have found them in small numbers or even as individuals.

They are medium-sized ducks, measuring about 17 in. in length, but are unfit for food since their flesh is quite tough, coarse and tasteless. They are very active in the water; can dive very quickly and can swim to great

depths in search of their food of mollusks and insects. They also rise from the water with the greatest ease and can fly very rapidly. They are usually quite silent, but are said to utter shrill whistles during the mating season.

RUDDY DUCKS (*Erismatura jamaicensis*), although small, measuring only about 16 in. in length, are regarded as very fine table birds. Both bill and feet are of unusual size, the latter propelling them through the water very swiftly. The narrow-feathered, stiff tail is usually perked comically over the back as they float upon the water. Their short, concave wings make a buzzing sound during flight, causing them to be known as "Bumblebee Coot" among sportsmen. They breed locally in the Northern States and northward and winter throughout the United States.

SNOW GOOSE (*Chen hyperboreus hyperboreus*). Geese are usually larger than ducks, their bills are shorter, stouter and the "gutters" or flutings on the sides are very prominent, producing a sort of grinning effect. Adult Snow Geese are entirely white, except the primaries, which are black. The head is often or usually tinged with pale rusty and the bill and feet are pinkish. Young birds are gray or variously mottled. This variety measures about 25 in. in length. They nest on the ground within the Arctic Circle west of Hudson Bay to Alaska. In winter they are found throughout western United States and casually in the east. They usually occur in large flocks, fly high in a long, extended line and are very wary whether in flight or feeding. They live on grain, tender grasses, mollusks and insects; their flesh is palatable, but not nearly equal to that of Canada Geese.

GREATER SNOW GEESE (*Chen hyperboreus nivalis*) vary from the preceding only in size, measuring about 30 in. in length. Large specimens of the last are just like small ones of this, so that the distinction is not perfectly satisfactory, as it has to be based largely upon locality found. The present variety is supposed to breed east of Hudson Bay and to winter in southeastern United States. Migrates chiefly through the interior, but is not uncommon on the Atlantic coast south of Chesapeake Bay.

BLUE GOOSE (*Chen carulescens*). This is midway between the two previous varieties in size and for a long time was supposed to be a color phase or a young plumage of the Snow Goose. Its breeding range is not definitely known, but is supposed to be in northern Ungava. They migrate through the Mississippi Valley and winter in the southern portions of it. They are also of rare or casual occurrence on the Atlantic coast and west of the Rocky Mountains. They cannot be termed at all abundant, but sizable flocks of them are sometimes seen and again one or two individuals may be in with a company of Snow Geese. Those who have eaten them declare their flesh to be better than that of the last species.



SNOW GOOSE
BLUE GOOSE



ROSS GOOSE

WHITE-FRONTED GOOSE

ROSS GOOSE (*Chen rossi*). This is by far the smallest of our geese, measuring but 21 in. in length, about the same size as the Mallard. The greatest difference between this species and Snow Geese, besides size, lies in the bill, which has less prominent teeth, little or no black along the open sides and which is studded about the base with numerous little carunculations. The breeding grounds are unknown, but are supposed to be north of Mackenzie. It is regarded as quite a rare bird, but sometimes appears in considerable numbers in California during winter.

EMPEROR GOOSE (*Philacte canagica*). We have not figured this species since it is found in such a restricted and little visited area, it occurring only on the Alaskan coast chiefly north of the Aleutian Islands. It is a handsome species, the sexes as usual being alike in plumage. The white head is relieved by a black throat which shades into the bluish, slate-colored body, each feather of which is edged with black and white so as to produce a very scaly effect.

WHITE-FRONTED GEESE (*Anser albifrons gambeli*). In the interior and western portions of America this is one of the most abundant species of geese, but on the Atlantic seaboard they are only of casual occurrence. They breed near the Arctic coast, west of Hudson Bay, and pass the winter

months in the lower Mississippi Valley and on the Pacific coast.

White-fronted Geese are very noisy, their loud and continued cackling being responsible for their being known quite commonly as "Laughing Geese." They are less often called "Pied Brant." When young birds first arrive from the north, they are not timid, and many are killed, but they soon become very shy and difficult to approach. When feeding, they post sentinels to warn the rest of the flock of approaching danger. Most of them are secured by hunters who ambush them on the way to and from their feeding grounds. Their mode of flight is a V-shaped formation, the bird at the apex leading the way until tired and then falling back to the end of the line and allowing a new leader to break the wind.

CANADA GEESE (*Branta canadensis canadensis*) are the most highly prized of all water fowl. Great creatures, 3 feet or more in length, and with tender flesh and appetizing, they appeal to the gourmand; wary yet coming to decoys, they furnish the greatest sport for the hunter, and he also gets game worth while when he brings one down.

Canada Geese breed from the Northern States north to the limit of trees and winter chiefly in the southern half of the United States. Northern hunters eagerly await the loud honking of the first spring flock, while southern ones just as enthusiastically wait their return in late fall. It is a grand sight to see the wide V-shaped line of great birds swiftly speed overhead, their large wings strongly beating the air and from their throats to hear the loud honking that sounds so like a pack of fox hounds in full cry.

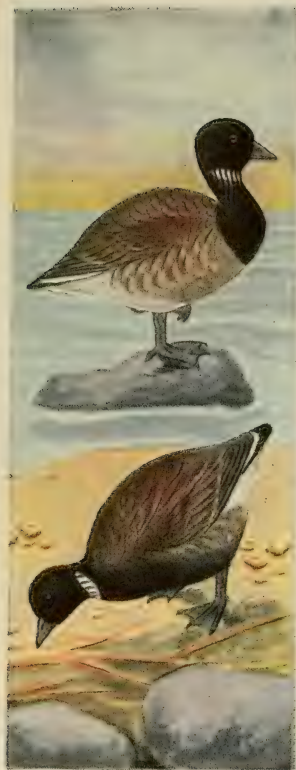
HUTCHINS GOOSE (*Branta canadensis hutchinsi*). This is a slightly smaller variety found chiefly in western United States, measuring about 28 in. in length and the tail having normally but 16 feathers, while that of the last species has 18 or 20. It occasionally occurs on the Atlantic coast.

WHITE-CHEEKED GOOSE (*Branta canadensis occidentalis*). This species is equal to the Canada Goose in size but is slightly darker, especially on the under parts, and the black on the throat often extends up to the chin, thus making two white cheek patches instead of a single cravat extending from ear to ear. It is found on the Pacific coast, breeding in the north and wintering south to California.

CKACKLING GEESE (*Branta canadensis minima*) are quite small, measuring but 2 feet in length. In appearance they are just like a dwarfed White-cheeked Goose, only the tail normally contains but 14 or 16 feathers. They are found chiefly west of the Rocky Mountains. Geese feed upon berries, grasses and roots, which they gather in fields, along shore, or by "tipping" in shallow water. They swim well, but do not dive. On land they walk easily and gracefully compared with the walk of barnyard geese.



CANADA GOOSE
CKACKLING GOOSE



BRANT
BLACK BRANT

BRANT (*Branta bernicla glaucogastra*). The common Brant is found in eastern North America and Greenland, breeding on Arctic Islands and wintering on the Atlantic coast southward from Massachusetts. They make their appearance on the coast of the United States in October, the various flocks congregating in favorite places in immense numbers. They fly with no apparent leader and in a compact flock. They are very noisy, their notes being loud, rolling and guttural, quite unlike the honking of geese. They are not nearly as shy and wary as Canada Geese, it often being possible to approach a flock on the water or on a sand bar near enough for a shot. They come to decoys with the greatest confidence and, consequently, are killed in such great numbers that they are yearly becoming less abundant.

Their food consists almost wholly of grasses and roots which are pulled up in shallow water where they can easily reach bottom. They do not dive at all, in fact even a wounded Brant cannot dive, but tries to escape by swimming as rapidly as possible to windward.

Brant are about equally often called "Brent Goose" or sometimes "Black Brant" to distinguish them from the Snow Geese, which are in the same places called "White Brant." This latter cognomen,

however, is quite incorrect; it is reserved particularly for the next species.

BLACK BRANT (*Branta nigricans*). This species is of the same size as the last, namely 24 in. in length. They are, however, darker above, and the black on the breast extends over the under parts to the belly and crissum. The white neck patches are also larger and usually meet in front. Black Brant are birds of the Pacific coast, there wholly replacing the species that is found in the east. They are rarely found inland, but keep off the coast and in bays in large flocks. Their flight is rather heavy and not very fast, performed in a widely strung out line at right angles to their line of progression. Both species of Brant usually fly rather low, following the coast line and rarely cutting across even short stretches of land.

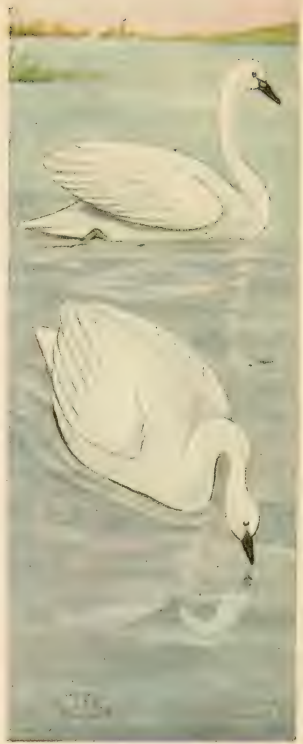
WHISTLING SWAN (*Olor columbianus*).

These great birds, measuring nearly 5 feet in length, are still not uncommon in the interior and also occur in numbers on the South Atlantic coast. They nest only in high latitudes, chiefly on Arctic islands and the mainland from northern Hudson Bay to Alaska. This, the smallest of our two species, can best be identified by the form of the bill. The nostril is located about midway between the eye and the extreme tip, while that of the next species is nearer the eye than it is to the tip of the bill. The present species also has a small yellow spot between the eye and nostril.

During migration, swans fly at a great elevation in a long V-shaped line with an wise old gander at the apex. Their flight is swift and very easy and graceful, as their wings are of enormous size, easily capable of carrying even such heavy bodies. From time to time, the leader or some of the band utter clear flageolet-like notes that reach the ground like voices from the sky, as the swans may be so high as to be almost invisible. When within sight of their final stopping places, they set their wings and gradually float downward, circle around so as to come up against the winds and then plump into the water with great splashes. They are most beautiful sights, either in flight or as they sit lightly and gracefully on the water. They feed chiefly upon grasses

and roots that they pull up from the bottom, usually in water shallow enough so that they do not have to "tip up." They seldom come to decoys, but are shot by gunners in ambush between their feeding and resting places, or they are taken by sailing down on them before the wind, the swans having to flap vigorously against the wind before being able to leave the water.

TRUMPETER SWAN (*Olor buccinator*). This species measures more than 5 feet in length and differs otherwise as stated above. It is quite rare now, but breeds west of Hudson Bay and winters in southwestern United States and the lower Mississippi Valley.



WHISTLING SWAN
TRUMPETER SWAN



KING RAIL
CLAPPER RAIL

KING RAIL (*Rallus elegans*). These are the largest of the true rails, measuring about 18 in. in length. They are much brighter colored both above and below than the similar sized Clapper Rails. They inhabit almost exclusively fresh-water marshes in eastern North America, breeding throughout the eastern states and wintering in the southern ones. Their form is typical of that of the rail family: long bill, long legs and short tail, the latter often carried erect over the back. They are very sly and secretive in all their habits, keeping well under cover of rushes or marsh grass, and doing most of their feeding after dark. It is very difficult to flush them, particularly without a dog. Their flight is very weak and fluttering; they fly but a few yards before dropping into the protecting grass again. On the ground, however, they are very active and quite graceful, running swiftly and threading their way with ease through the densest of weeds, rushes or brush. At night the marshes often resound with their loud, explosive, grunting calls.

Their food consists of aquatic insects, seeds, roots and grasses, which impart a delicate flavor to their flesh and puts them in the game-bird class, although the sport of shooting them is confined largely to one's ability to make them fly, for once awing

they are so easy a mark that even a novice can seldom miss one.

CLAPPER RAILS (*Rallus crepitans crepitans*), of the same size but paler colored than the last species, are confined almost wholly to salt or brackish marshes near the coast, breeding north to Massachusetts and wintering on the South Atlantic coast. Several local varieties are recognized: the Louisiana Clapper Rail on the coast of that state, the Florida Clapper Rail on the Gulf coast of Florida and the Wayne Clapper Rail on the coast from North Carolina to Florida. These differ but slightly in coloring or dimensions.

CALIFORNIA CLAPPER RAIL (*Rallus obsoletus*), found in salt marshes of the Pacific coast near San Francisco, is marked like the Clapper Rail above and is as brightly colored as the King Rail below.

VIRGINIA RAILS (*Rallus virginianus*) are in plumage almost perfect miniatures of King Rails, but they measure only 10 in. or less in length. They are more or less abundant in fresh-water marshes throughout the United States and southern Canada, breeding in the northern parts and wintering in the southern parts of their range. They live usually in dryer portions of grassy marshes than Soras commonly inhabit, and usually nest on the edges, making a small mound of grasses and flags upon which the eight to twelve buffy-white, brown-speckled eggs are laid. The young, like those of all rails, are hatched covered with a jet-black down, leaving the nest and following their parent within a few hours after emerging from the eggs.

SORAS (*Porzana carolina*), or Carolina Rails, are comparatively small, being only a trifle over 8 in. long. Immature birds have a white face and buff breast, while adults have a black face and blue-gray breast. Soras are the most abundant of our rails, breeding throughout the northern half of the United States and southern Canada and spending the winter in southern United States. Although of such small size, they are killed in almost countless numbers for the sake of the small but delicate morsels that their bodies afford.

YELLOW RAIL (*Coturnicops noveboracensis*). This is a diminutive species under 7 in. in length, inhabiting eastern North America, breeding in the northern states and Canada and wintering in the southern ones.

So small and secretive as to be seldom observed.

BLACK RAIL (*Creciscus jamaicensis*). Tiniest of our rails; but 5 or 6 in. in length. Also found in eastern North America; replaced on the Pacific coast by the very similar Farallon Rail.

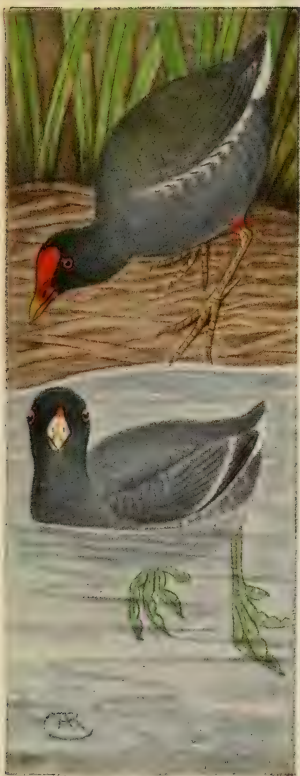


VIRGINIA RAIL
SORA



Yellow Rail

Black Rail



FLORIDA GALLINULE
COOT

or on land in marshes. Plumage gray like that of the Florida Gallinule, but secondaries tipped with white, bill white with a black band or spots in the middle, practically no frontal plate, and the toes each with a lobed web. Coots swim and dive fully as well as any of our ducks, and are frequently seen on bays and in rivers in company with them, or in flocks of their own kind. While swimming they have a habit of nodding the head in time to the strokes of their feet. They are to be found throughout the United States and southern Canada. Commonly known as "Blue Peters."

FLORIDA GALLINULE (*Gallinula galeata*). This is larger than any of our rails, measuring 14 in. in length; the bill is heavier even than that of the shorter billed rails and ends in a scaly shield on the forehead that is characteristic of gallinules. They share with Coots the names of "Mud-hen," "Water-hen" or "Moor-hen," the hen part of the name being because their notes, and they are very noisy birds, sound a great deal like the cackling of barnyard fowl. Their flight is no stronger than that of rails, but on land or water they are agile and graceful. Although they do not have webbed feet they can swim well and often dive when pursued. These birds are found commonly throughout temperate America, breeding from New England, Ontario and California south through South America to Chile.

PURPLE GALLINULE (*Ionornis martinicus*). Very similar in form to Florida Gallinules, but brilliantly plumaged, the whole head and under parts being a rich purplish-blue, becoming bluish-green on the sides and black on the belly; back and wing coverts olive-green; under tail coverts pure white. Not uncommon in the South Atlantic and Gulf States; wanders casually to Nova Scotia, Ontario and Wisconsin.

COOT (*Fulica americana*). A most remarkable bird, at home equally in the water



AVOCET (*Recurvirostra americana*). Easily known by the very slender upturned bill and the long bluish legs, the latter giving them a local name of "Blue-stocking." They are among the largest of our waders, measuring about 18 in. in length. The bird shown is in summer plumage. In winter and immature plumage they have no rusty color on the head. The plumage of the under parts is very firm and duck-like. Their webbed feet enable them to swim easily and they frequently do so.

They are particularly abundant in alkaline regions of the west, and occur north to Saskatchewan. They are rarely found east of the Mississippi River.

They frequently feed in shallow water by immersing the head and sifting the soft mud with their slender bills.

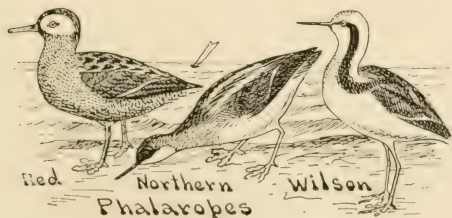
BLACK-NECKED STILT (*Himantopus mexicanus*). These birds, which are easily recognized by their striking black-and-white plumage and by the unusual length and slenderness of their red legs, are abundant in southwestern United States, breeding north to Oregon and Colorado and along the Gulf coast to Florida and Cuba. They feed chiefly by wading and gleaning tiny insects from the surface of the water or from aquatic plants rising above the surface.

PHALAROPES are small shore birds having lobed webs on each toe, thus having excellent swimming power. Their feathers underneath are very closely set and waterproof. Wilson Phalarope, which has a chestnut stripe on the side of the neck, breeds in the interior,



AVOCET

BLACK-NECKED STILT



from Alberta south to Texas. Red and Northern Phalaropes, the former rufous below and the latter with the neck largely reddish-brown, breed in Arctic regions and migrate chiefly on the coasts or at sea.



WOODCOCK
WILSON SNIPE

WOODCOCK (*Philohela minor*) breed throughout eastern United States and the adjacent Canadian Provinces and winter chiefly in our southeastern states. They are stockily built, upland game birds, measuring about 11 in. in length, of which length about one quarter is contained in the long heavy bill. They feed at night in muddy places in bogs, swamps or along brooks, their bills with the flexible, finger-like tips being admirably adapted to withdrawing worms from their places of concealment. Their eyes, which are large so that they may see well after dark, are placed far back and close to the top of the head so they may see about them when their bills are immersed to their hilts in mud. After showers Woodcock frequently come even into large cities and gather worms from lawns. This accounts for the numbers that are caught by cats and that are found dead after having flown into unseen wires. Because of their feeding habits, they are locally known as "Bog-birds." The term "Whistling Snipe" is sometimes applied, because during flight the three outer wing feathers, which are very stiff and narrow, produce a shrill whistling sound.

Woodcock lay their four pear-shape eggs in depressions among dead leaves in thickets or woods, usually late in March or early in April.

Their flight is fast and very erratic, making them difficult targets for the novice, which fact accounts for their continued existence in the face of the annual shooting to which they are subjected.

WILSON SNIPE (*Gallinago delicata*). These birds, which measure about the same as Woodcock, although their bodies are much smaller, are common throughout North America, breeding in northern United States and Canada and wintering in southern United States. They frequent meadows and other open wet places, from which they flush with a sharply whistled "scaipe" and go zigzagging away in a manner most confusing to any but a tried gunner. They are almost wholly known among the sporting fraternity as Jacksnipe.

Their excellent flesh, as well as the difficulty of shooting them, make them very popular among gunners.

DOWITCHER (*Macrorhamphus griseus griseus*). Dowitchers are divided into two races: the present, which is the eastern form, and the Long-billed Dowitcher, which is supposed to be chiefly western. The former probably breeds in northern Ungava and Arctic islands and migrates chiefly along the Atlantic coast; the latter breeds along the Arctic coast west of Hudson Bay and migrates through the western part of Mississippi Valley, both wintering from the Gulf States to South America. Since the distinction is dependent wholly upon size and length of bills, and these features among shore birds are always very variable, they may well be considered as one variety, as in all probability they are.

Like most of the sandpipers a great difference exists between the summer and winter plumages, the latter being composed only of grays and whites, as shown by the small bird in the upper background. Although very small, only a trifle more than 10 in. in length, they are shot in great quantities; while quite wary, they very readily decoy and consequently are very easy to secure. They are known by a great variety of names, most common of which are "Red-breasted Snipe," "Robin Snipe," "Brown Snipe," "German Snipe" and "Gray-back," some referring to the summer and some to the winter plumages. They are quite gregarious and are usually seen in large flocks during migrations, though sometimes a few mix with flocks of other species.

STILT SANDPIPER (*Micropalama himantopus*). These are among the least often seen of the smaller shore birds and are most frequently observed in with flocks of smaller kinds. They themselves are tiny, measuring less than 9 in. in length and are consequently not often shot; yet they are yearly becoming scarcer and apparently will soon not be found at all. Several years ago I used to see flocks of from ten to fifty individuals, but the last few years I have seen only one or two Stilt Sandpipers in with flocks of the smaller Least and Semi-palmated varieties. They are not in the least timid and allow anyone to approach within a few feet of them.



DOWITCHER
STILT SANDPIPER



KNOT (WINTER; SUMMER)

PURPLE SANDPIPER (WINTER)

PRIBILOF SANDPIPER (SUMMER)

KNOT (*Tringa canutus*). While these birds migrate to some extent through the interior, they are there seen in nothing like the abundance with which they occur on the Atlantic seaboard, although they do not to-day occur in such numbers as they did a few years ago. During fall, when their numbers are augmented by the young of the year, flock after flock passes the length of our coast; at this season they are clothed in plain gray and white, the immature birds being rather handsomer than their parents, for the feathers on the back are edged with dark gray and white, which gives a pleasing scaled effect to their plumage. In this dress they are almost universally known as "Gray-backs," a name also applied to Dowitchers, but more frequently to this species. In the spring dress they are known as "Red-breasted Sandpipers," "Robin Snipe" and sometimes as "Horse-foot Snipe."

They are of quite stout build, but small, measuring but a little more than 10 in. in length. They fly in compact flocks and come to decoys readily, their ranks being sometimes woefully thinned by the first volley from the blind. They feed either along the beaches or mud flats, gathering insects and shellfish from the ground or probing for them like snipe. They breed in the extreme north and winter from the Gulf coast to Patagonia.

PURPLE SANDPIPERS (*Arquatella maritima maritima*), "Rock Sandpipers" or "Winter Snipe," delight in cold weather. They breed in the extreme north and in winter rarely go south of Long Island and many pass that season in high latitudes. They are casually found in the interior and rarely along the coast to Florida. They frequent bold rocky shores, getting their food chiefly from the kelp and seaweed. The winter plumage is shown by the second bird from the front; in summer the back is mixed with buff and rusty similar to that of the bird below which is a subspecies.

PRIBILOF SANDPIPER (*Arquatella maritima ptilocnemis*). This species, which is figured in the summer plumage, breeds in the Pribilof Islands and winters on the southeastern Alaskan coast.

PECTORAL SANDPIPERS (*Pisobia maculata*), better known perhaps as the "Grass Snipe," are one of the most abundant of the sandpipers; in some localities, too, they are known as "Kriekers" because of the sharp notes that they utter. They breed on the Arctic coast west of Hudson Bay and winter in South America, migrating through the interior and Atlantic coast of the United States and rarely occurring on the Pacific coast south of British Columbia. Their plumage is a little brighter in summer than in winter but shows none of the marked changes like those of some of the preceding species. During breeding season the skin on the breast of the male becomes soft, flabby and capable of considerable distension; this pouch having been inflated is gradually decompressed as the birds utter musical resonant whistles.

"Grass Snipe" frequent marsh and meadow in just such places as we find Wilson Snipe. Although they may be present in large flocks, they have the habit of taking flight one at a time and rapidly disappearing in an erratic course. Quantities of them find their way into the hunter's game bag, although they are too small to be of much account as food, being but 9 in. in length.

UPLAND PLOVER (*Bartramia longicauda*), or Bartramian Sandpipers as they were formerly termed, are apparently following the course of the Eskimo Curlew and are on the road to complete extinction. Only a close season everywhere can prevent the calamity, and it may be too late now to save them by any means. They breed from Maine, Keewatin and Alaska south to Virginia, Missouri and Oregon and winter on the pampas of South America. During the nesting season they are usually in the vicinity of water, but at other times may be seen on hills or prairies catching insects of various kinds. During migration, they are shot relentlessly; they have their favorite feeding grounds known to hunters who there await them. Their call is a very melodious bubbling; they come readily to an imitation of it. They are about 1 foot in length.



PECTORAL SANDPIPER
UPLAND PLOVER



WHITE-RUMPED SANDPIPER

BAIRD SANDPIPER

LEAST SANDPIPER

WHITE-RUMPED SANDPIPERS (*Pisobia fuscicollis*) are placed by sportsmen in that class of small species known as "Peeps," too small to be worth the taking, the present species measuring but little more than 7 in. in length. Yet they have their dangers, for youthful hunters, unable to stalk larger game, often practice on these and I have known of men old enough to know better, to fire into flocks of "Peeps" just to see how many they could get. They breed on our Arctic coast and migrate most abundantly through the Mississippi Valley, but also in numbers along the Atlantic coast to southern South America. The upper bird shows this species in its summer plumage; it is a trifle grayer in winter, being about the same color as the bird below, from which it is of course easily identified by the white rump patch; the breast of the present species is also more heavily streaked than that of the next.

BAIRD SANDPIPER (*Pisobia bairdi*). This species, which has a dark rump, is of the same size as the last. Either kind may be found in flocks composed only of their own species or in mixed flocks of the two and other smaller sandpipers. Both species are very confiding and will allow anyone to approach within a few feet of them as they run about at the water's edge gathering the tiny insects that are always present in abundance.

Like the last, these birds migrate most commonly through the Mississippi Valley, but they also occur on both coasts.

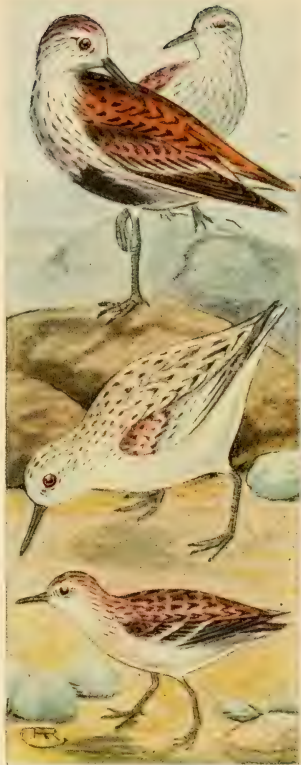
LEAST SANDPIPER (*Pisobia minutilla*). The most diminutive of all our sandpipers, but almost matched by the Semi-palmated, being only 6 in. in length. The toes are wholly devoid of webbing, the back is browner and the breast more distinctly streaked than that of the other species of similar size. These sandpipers breed in the northern half of Canada and Alaska, and winter from southern United States southward occurring during migrations throughout the land. They are almost devoid of fear and are seldom and ought never to be shot.

RED-BACKED SANDPIPER (*Pelidna alpina sakhalina*). Otherwise known as "Dunlin," "Black-bellied Sandpiper" and "Winter Snipe." Easily recognized, even when in the gray winter dress, by the rather stout slightly decurved bill. Like Purple Sandpipers they like cold weather, and after breeding along the Arctic coast they pass the winter along our coasts south of Washington on the Pacific and of New Jersey on the Atlantic side. They are rarely met with in the interior except casually along the shores of the Great Lakes. While they are but 9 in. in length, they are so plump and so numerous that some gunners cannot resist the temptation as they wheel over their decoys, but the majority consider them not worth while as game. They may be found either on the sea beaches or on mud flats.

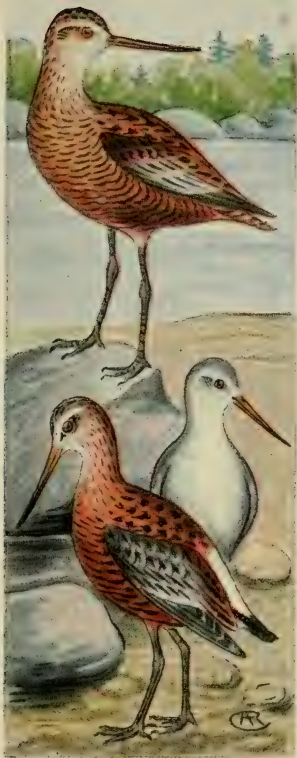
SANDERLING (*Calidris leucophæa*). The lightest colored of the sandpipers, being chiefly white in winter, but in summer having the head and breast more or less washed with rusty. Breeds throughout the Arctic regions of the Northern Hemisphere and, in America, winters from the Southern States south to Patagonia. On the coasts and the shores of the Great Lakes they occur abundantly during fall, frequenting the open sea beaches as well as more sheltered bays. Because of their liking for the outer sand bars, they are often called "Surf Snipe."

Their plump bodies are highly prized by youthful sportsmen, but those of more mature judgment pronounce their length of only 8 in. as below their standard of sportsmanship.

SEMI-PALMATED SANDPIPER (*Ereunetes pusillus*). So called because a small web exists between the outer toes; to gunners they are known, with other small sandpipers, simply as "Peeps." Of the same size as the Least Sandpiper, namely 6 in. in length. Breeds in the Arctic regions and is very abundant during migrations from the Atlantic coast to the Rocky Mountains. West of the Rockies a very similar species, Western Sandpiper (*Ereunetes mauri*), occurs. Its upper parts are brighter, like those of the Least Sandpiper, and the bill is slightly longer.



RED-BACKED SANDPIPER
SANDERLING
SEMI-PALMATED SANDPIPER



MARBLED GODWIT
HUDSONIAN GODWIT

MARBLED GODWIT (*Limosa fedoa*). The Godwits are among the largest and most highly prized of shore birds, the present species measuring about 18 in. in length, including the long up-curved bill. They breed in the interior from Saskatchewan south to North Dakota and winter from the Gulf coast and Lower California southward. They only casually occur on either the Atlantic or Pacific coasts during migration. Their three or four creamy-buff eggs, spotted with yellowish-brown, are laid in scantily lined depressions on the ground in the vicinity of water; as usual with birds of this order, the eggs are pear-shaped and very large compared with the body of the bird.

They are highly prized for the table and eagerly hunted whenever they appear on the marshes; ordinarily, they are rather shy, but since they come to imitations of their calls and to decoys stuck up in the mud, their shyness does not avail them. They are commonly known as "Brown Marlins" or "Spike-bills."

HUDSONIAN GODWIT (*Limosa haemastica*). A smaller species than the last, measuring about 16 in. in length; in winter plumaged in gray and white, but in summer brightly colored as shown. Notice that this species has a white rump, while the last has not. Hudsonian Godwits, otherwise known

as "Ring-tailed Marlins," "Black-tails" and "White-rumps," breed in Arctic regions. Their fall migration is performed chiefly off the Atlantic coast, leaving land at Newfoundland and not stopping this side of the West Indies on their route to southern South America, unless blown from their course, when they occur on New England and Long Island shores. Returning, their course lies chiefly up the Mississippi Valley to their nesting grounds. Their line of flight is almost precisely the same as that taken by the Eskimo Curlew, which is now practically extinct.

PACIFIC GODWITS (*Limosa lapponica baueri*), which are similar in size to the Marbled, breed in western Alaska and migrate through Japan and eastern Asia. They have no barring below, otherwise not differing greatly from Marbled Godwits.

GREATER YELLOW-LEGS (*Totanus melanoleucus*). During migrations, these rather large shore birds, measuring about 14 in. in length, appear abundantly in meadows, marshes, about ponds, streams or even on sandy beaches. They wade in the shallows, picking up all forms of animal life, even small fishes, or run with graceful carriage along the shore. While they may at times be met in large flocks, they usually go in companies of about six. They are exceedingly wary and suspicious; at the first sight of anyone approaching, away they go uttering loud warning whistles which resemble *wheu-wheu-wheu*, alarming everything within hearing, often to the great discomfort of the sportsmen. Because of these tactics they are not very favorably regarded, as some of their local names show, such as "Greater Tell-tale," "Tattler" and "Yelper." They are also termed "Winter Yellow-legs," because they appear within our border later in fall than the next species, usually not coming until August, while the next species arrives in July. Their call note is a clear, musical *tu-weep*, very different from the alarm cry.

It is a beautiful sight to watch a company of Yellow-legs arriving at their feeding grounds. We hear the calls indicating their approach even before the birds become visible high in the air. Sweeping swiftly down on their long angular wings, they circle about once or twice to make sure no enemies are lurking, then sail gracefully to the ground; as soon as their feet touch earth, their wings are carefully stretched upward to their fullest extent and then properly tucked away on the back. This is a habit that many shore birds have upon alighting.

Greater Yellow-legs breed in northern Canada and winter from the Gulf States south to Patagonia.

LESSER YELLOW-LEGS (*Totanus flavipes*). Also called "Summer Yellow-legs," in addition to most of the local names given under the preceding. Their breeding and winter range, as well as migration routes correspond to those of the larger species. The present one measures about 11 in. in length.



GREATER YELLOW-LEGS
YELLOW-LEGS



SOLITARY SANDPIPER
WILLET

SOLITARY SANDPIPER (*Helodromas solitarius*). As the name would imply, these birds are not gregarious to any extent, rarely more than a half dozen being found together and usually individuals or pairs being met about the edges of ponds or small lakes, chiefly in wooded districts. They feed in the muddy or mossy banks, or wade in the shallow water, picking their food with graceful motions, stopping every once in a while to look about them and to teeter in a self-satisfied way. They are usually quite silent and will allow a close approach before they take wing and easily sail across to the other side of the pond. They have, even more than other species, the habit of elevating their wings, showing the handsome markings on the under sides, and then folding them carefully in place. Sometimes as they take flight they utter a very clear, mellow whistle. They average in length a little over 8 in.

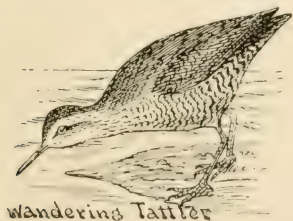
Solitary Sandpipers breed from northern United States northward and winter in South America. The present variety is found chiefly east of the Great Plains, while to the west is a very similar variety called Western Solitary Sandpiper, which is very slightly larger and which has brownish spotting on the back instead of whitish, as in the eastern form. The nesting of these birds remained undiscovered for a long time and, while even

at the present date but few nests have been recorded, we know that they lay their eggs in old nests of other birds, up to twenty feet above ground. Since this is the habit of a similar European species, it is strange that the nest in this country should have remained undiscovered until 1903.

WILLET (*Catoptrophorus semipalmatus semipalmatus*). These large shore birds, measuring about 16 in. in length, breed on our South Atlantic coast and winter in South America, often wandering north to New England after breeding. The Western Willet, which is very similar, occurs chiefly west of the Mississippi River, but also on the Atlantic coast during migrations. They are very noisy, their loud whistles sounding like *pilly-will-willet*.

BUFF-BREASTED SANDPIPER (*Tryngites subruficollis*). This appears to be one of the rarer of the sandpipers, although it has been reported at times as abundant in the Mississippi Valley during migrations. It is seldom seen on either the Atlantic or Pacific coasts during its flights between the breeding grounds along the Arctic coast to Argentina, where it is found in winter. They are found feeding upon insects on the prairies rather than about ponds or marshes, their habits being quite similar to those of Up-land Plover.

SPOTTED SANDPIPERS (*Actitis macularia*) enjoy the distinction of being practically free from destruction by gunners. In the first place they are too small to be worth while, being but little more than 7 in. in length; they seldom travel more than four in a flock and do not keep closely together; and as they commonly breed throughout the United States and Canada even in the vicinity of habitations and are so very confiding, they become so well known and admired that only an ingrate would shoot them. They nest among grass or clumps of weeds anywhere, not necessarily near water. They live almost wholly upon aquatic or field insects and are useful birds economically. To a greater extent than any other of our shore birds they have the habit of almost incessantly teetering or bowing whenever they are standing, a habit that causes the country boy to almost universally know them as "Tip-ups" or "Teeter-tails." As usual with all birds of this order, the young are hatched covered with down, and leave the nest and follow their mother about almost as soon as they emerge from the eggs.



BUFF-BREASTED SANDPIPER
SPOTTED SANDPIPER (WINTER;
SUMMER)

WANDERING TATTLER (*Heteractitis incanus*). This is a slate-gray and white species occurring on the Pacific coast, but never in any abundance. They breed on the Alaskan coast and winter on the shores of Lower California.



LONG-BILLED CURLEW
HUDSONIAN CURLEW

LONG-BILLED CURLEW (*Numenius americanus*). The largest of the curlews and also the largest of the shore birds, measuring about 2 feet in length. The bill is very long and quite curved, measuring from 4 to 8 in. in length. Not many years ago these great birds occurred regularly along the Atlantic coast north to New England, but at present are only regarded as stragglers. They breed from Texas and northern California north to Saskatchewan and winter on the South Atlantic and Gulf coasts.

Even in the interior they are rapidly diminishing in numbers, for no gunner loses the chance to bag them and they are the very easiest of game to secure. They are killed chiefly because of their size; their flesh is rather tough and not very desirable. They come to decoys readily, but one does not even need decoys, for an imitation of their clear flute-like *cur-lew* will bring passing birds within range without fail.

HUDSONIAN CURLEWS (*Numenius hudsonicus*) or "Jack Curlews," as gunners usually call them, measure only about 17 in. in length. Notice that the crown is solid brownish-black, with a narrow stripe through the middle, this easily distinguishing them from the smaller Eskimo Curlews, which have the crown streaked all over with buff. These birds breed along the Arctic coast and mi-

grate mainly along both Atlantic and Pacific coasts to their winter homes, which are from the Gulf coast to southern South America. If the weather is favorable, they leave land at Labrador or Newfoundland and do not stop along the coast of the United States.

ESKIMO CURLEWS (*Numenius borealis*) are but 13 in. in length, have short, little curved bills and differ otherwise from the preceding species as explained above. They breed in Arctic regions, migrated in close flocks along the coast to southern South America and returned through the Mississippi Valley; they are at present practically extinct.

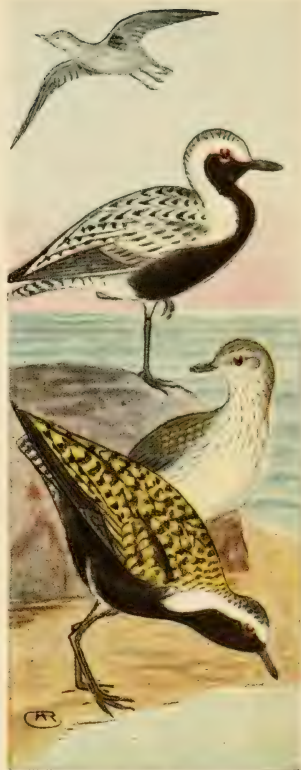


Eskimo Curlew

BLACK-BELLIED PLOVER (*Squatarola squatarola*). These handsome birds are known to sportsmen chiefly as "Beetleheads" or "Bullheads." Nearly a foot in length and heavy-bodied, these plover are among the most highly prized of shore birds, not because their flesh is of unusual merit, for it is not, but because of their imposing size and the fact that they are just wary enough to furnish good sport. They will come to decoys, but the gunner must be well concealed; and at the first shot they are off with a rush, never showing that helplessness that characterizes the curlew under similar conditions. They breed in the Arctic regions and migrate along both coasts, but are quite rare in the interior except casually about the Great Lakes. They winter from the Gulf coast southward. Their flight is powerful, but has an appearance of heaviness because they progress in straight lines with almost continuous flapping instead of twisting, as we are accustomed to see most shore birds do. They are found on mud flats rather than on ocean beaches.

In winter both adults and young are quite similar in plumage, neither showing any strong black markings; the backs of the latter are spotted with dull yellow which often causes them to be mistaken for young of Golden Plover. The axillars, or long feathers lining the under side of the wing, are black on this species, while they are gray on the next—an infallible distinguishing mark. The present species also has a tiny hind toe, while the next has none.

GOLDEN PLOVER (*Charadrius dominicus dominicus*). This is one of the very handsomest of shore birds, adults in summer being unmistakable, while immature birds and winter adults differ from the preceding as explained above. After breeding in Arctic regions they migrate south across the Atlantic from Labrador to the pampas of South America. On the return journey they all pass through the Mississippi Valley. They feed on prairies and side hills as Upland Plover do. In consequence of the nature of their food their flesh is very palatable, much more so than that of the preceding.



BLACK-BELLIED PLOVER
GOLDEN PLOVER



KILLDEER
SEMI-PALMATED PLOVER

KILLDEER (*Oxyechus vociferus*). These handsome but noisy birds are abundant throughout the United States and southern Canada except in New England and the eastern Provinces, where they are only locally or casually found. The sexes are alike in plumage, and immature birds are only a little duller plumaged than adults. They are very noisy at nearly all times; they delight in chasing one another over the fields, all screaming their loud, strident *kill-dee, kill-dee*, and when they happen near the nest of a pair, all the Killdeer in the neighborhood promptly arrive and add their voices to those of the owners.

They are not at all confined to the proximity of water, in fact during the nesting season they may not be within miles of it. They are useful birds to the agriculturist, for their food is chiefly of injurious insects. They run rapidly and gracefully, stopping every few feet to stand erect and look about them. Their eggs are laid in pastures or cornfields in slight depressions with scant lining of straw and pebbles; they are creamy-buff, thickly speckled and blotched with blackish-brown.

SEMI-PALMATED PLOVER (*Ægialitis semipalmata*). Commonly known as "*Ring-necks*." Considerably smaller than Killdeer, measuring but 7 in., while the last species measures about 10 in. Breeds from the Gulf of St. Lawrence and Keewatin north to the Arctic coast, migrates throughout the United States, both coasts and interior, and winters from the Gulf States to Chile and Patagonia. During migrations they are particularly abundant on mud flats and protected beaches. The experienced gunner rarely shoots them, for they are too small to be of consequence and are too easy to get. But the small boy with his first gun may create havoc in their ranks, for they are still legally game, although it is the consensus of opinion among sportsmen as well as ornithologists that all small shore birds should be protected. "*Ring-necks*" are the most confiding of birds; they will feed along the water's edge within two or three feet of you, if you are sitting quietly.

PIPING PLOVER (*Ægialitis meloda*). These birds, otherwise known as "Beach Birds" and "Pale Ring-necks," are the lightest colored of any of our shore birds, even whiter than the next species, which is known as the Snowy Plover. They are found locally in the interior, chiefly about the Great Lakes and on the Atlantic coast north to Nova Scotia, although in the greater part of this range they have now become wholly extirpated because of shooting and more perhaps because of building along the coast. They are found almost exclusively upon sandy beaches, with which their colors harmonize so closely that they are hardly visible as they run about. Their eggs, which are laid in slight hollows in the sand, are also almost invisible since their ground is sand color and the few small specks that are on the surface only add to the degree with which they mock their surroundings.

They can run with almost incredible swiftiness, and they will usually attempt escape by running and hiding rather than by flight. The tiny little plover are just as nimble of foot as their parents, and will hide beside pebbles or behind a few spears of beach grass so effectively that it is almost impossible to discover them.

Piping Plover fly swiftly and with the grace characteristic of shore birds, alternately twisting so as to expose first the upper parts and then the under surfaces. Their notes are exceedingly musical, a clear, piping *queep, queep, queep-lo*. They measure about 7 in. in length.

SNOWY PLOVER (*Ægialitis nivosa*). Slightly smaller than the last species, the back just a little darker, the addition of a black mark back of the eyes and with the bill wholly black instead of with an orange base like that of the Piping Plover. Their actions, like those of the latter bird, are quite different from those of the abundant Semi-palmated Plover. Having the ability to hide effectually, they constantly make use of this gift, which is wholly at variance with the habits of confiding "Ring-necks." Snowy Plover are found in southwestern United States, north to Kansas and central California.



PIPING PLOVER
SNOWY PLOVER



WILSON PLOVER
MOUNTAIN PLOVER

WILSON PLOVER (*Ochthodromus wilsonius*). This species differs from the "Ring-neck" most noticeably in the large size of the wholly black bill and the broader black band across the breast. It is also slightly larger, measuring a little under 8 in. in length.

They breed along the South Atlantic and Gulf coasts from Virginia to Texas and casually wander to New England and also to southern California. Their notes are quite different from those of other closely allied species, the call note being more of a chirp than a whistle, and their notes of anger, delivered freely when one is in the vicinity of their nests, are excited chipping whistles. They match the color of their surrounding almost perfectly and, as might be expected, usually trust to their plumage to escape detection as they sit upon their eggs in slight depressions in the sand.

MOUNTAIN PLOVER (*Podasocys montanus*). These birds can be regarded as "mountain" only in that they are often found at high altitudes, but on arid plains they are often known as "Prairie Plover," a name that is in reality better suited to them, for they spend most of their time on the prairies picking up grasshoppers and other insects. In summer they are to be found distributed in scattered pairs, but in fall they

unite in flocks of some size. They breed in western United States from Montana and Nebraska south to Texas and New Mexico and winter from the southwestern states through Mexico.

SURF BIRD (*Aphriza virgata*). This comparatively rare and little known bird, called the "Plover-billed Turnstone" wanders along the Pacific coast from Alaska to Chile. Its nest and eggs have not as yet been definitely reported, but it is believed to breed in the interior of northwestern Alaska.



Black Turnstone Surf Bird

RUDDY TURNSTONE (*Arenaria interpres morinella*). Turnstones are unusual in form, in that the bill is quite stout, pointed and has an upturned appearance since the top of the upper mandible is perfectly straight. The present handsome species breeds on the Arctic coast and migrates abundantly along both coasts, wintering from southern United States southward. The common Turnstone, a grayer variety, is an Old World species, a few of which breed in western Alaska and migrate through Japan. The Turnstone is commonly known among sportsmen as "Calico-back," "Horse-foot Snipe" and "Beach Snipe."

BLACK-TURNSTONE (*Arenaria melanocephala*). Of the same size as the last, measuring about 9 in. in length. Found on the Pacific coast, breeding in Alaska and wintering south from British Columbia.

OYSTER-CATCHER (*Hematopus palliatus*). A very large shore bird, measuring about 19 in. in length, breeding on the South Atlantic and Gulf coasts from Virginia to Texas and wandering to New Brunswick.

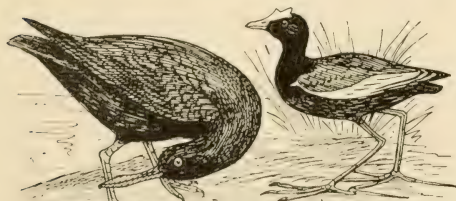
BLACK OYSTER-CATCHER (*Hematopus bachmani*), shown in the pen sketch, is chiefly sooty black and white. This species, found along the whole Pacific coast of North America, is wholly blackish-brown in plumage; the bill is bright red and the feet flesh color.

MEXICAN JACANA (*Jacana spinosa*) is a most remarkable species common in Mexico and reaching our borders in southern Florida and

Texas. The plumage is black, chestnut and yellowish-green; a scaly leaf-like shield protects the top of the head; the shoulders are armed with sharp horny points; and the toes and nails are of exceeding length, enabling them to walk over floating vegetation with ease.



RUDDY TURNSTONE
OYSTER-CATCHER



Black Oyster-catcher Jacana



BOBWHITE
FLORIDA BOBWHITE
MASKED BOBWHITE

BOBWHITE (*Colinus virginianus virginianus*). Better known perhaps as "Quail" or, in the south, as "Virginia Partridge," these are favorite game birds throughout the region they inhabit, which includes from Maine, Ontario, and North Dakota south to the Gulf States. In the northern portions of their range, particularly in New England, they have become very scarce through excessive hunting and unfavorable weather during nesting seasons. Although but 10 in. in length, they have short plump bodies that are much larger than those of most other birds of their dimensions. As shown, the plumage of the sexes is very similar except that the male has a pure white throat and line above the eye, while on the female these regions are buffy.

During fall and winter, flocks of six to twenty individuals may be found in brush-covered or stubble land. They squat motionless upon the approach of anyone and remain so until almost trod upon, when they rise with a sudden rush and whirl and scatter in all directions. As their line of flight is direct and in open ground, they are very easy to shoot. Besides, the sportsman has his dogs to point to their places of concealment, so he does not even have the startling effect produced by an unexpected rising to contend with. Only their great productivity can withstand the pace the gunners set them,

and even that does not avail in many sections.

Early in spring the males select their mate or mates—for they are inclined to be polygamous—after short but exciting battles with others and spread out over the country, each pair selecting a suitable spot in tall grass bordering fields, along walls or fences, in which the ten to sixteen pure white eggs will be laid.

During spring and summer the males repeatedly call to one another with their clearly whistled *bob-white* or *bob, bob-white*. In fall and winter they have a shorter call to gather scattered flocks, consisting of a repeated, soft *quoit, quoit*, etc.

FLORIDA BOBWHITE is a local race found in that state, very much darker colored than the ordinary birds.

MOUNTAIN QUAIL (*Oreortyx picta picta*). This, the largest of the quail, measuring 11 in. in length, is an abundant species in certain portions of Washington, Oregon and California. It is found in humid regions, while the very similar race, known as Plumed Quail, inhabits arid regions of the same states. The former has the upper parts slightly browner than the latter, a distinction that interests ornithologists but is of no consequence among sportsmen. During the hunting season they go about in small flocks. They are difficult to put up with a dog, for they are very fleet of foot and trust to their legs rather than to their wings whenever possible. If they are flushed, they separate and do not flock together again for some time, so that it is necessary to hunt them out one by one. This is very different from the actions of Bobwhite under similar circumstances, for within a few minutes they will commence calling and soon the remnant of the flock will have been united. The flesh of this species is regarded as excellent, in fact almost as good as that of the eastern quail.

The call of the male is a short hoarse crow, similar to that of a young bantam rooster. The female is plumaged quite like the male, but differs in having much shorter plumes. Their eight or ten eggs, which are laid in a grass-lined depression under a bush or log, are rather bright creamy-buff with no markings, or very faint ones.

SCALED QUAIL (*Callipepla squamata squamata*). There are two races of this species, the present one, which is found in southern Colorado, Arizona, New Mexico and Texas, and the Chestnut-bellied Scaled Quail, which is found in the Lower Sonoran zone of southern Texas. The latter variety is much like the former, except that the back is slightly browner, the under parts more buffy and the male has a patch of chestnut on the belly. They inhabit the chaparral and mesquite in dry washes and foothills and, like most western species, trust to their legs chiefly to take them away from danger. Commonly called "Blue Quail."



MOUNTAIN QUAIL
SCALED QUAIL



GAMBEL QUAIL
CALIFORNIA QUAIL

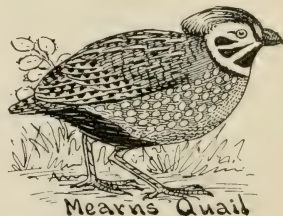
GAMBEL QUAIL (*Lophortyx gambeli*). A handsome species found in arid canyons and river bottoms of the southwestern states, north to Colorado and east to western Texas. In fall they gather into flocks sometimes numbering fifty or a hundred birds, spreading over the country to feed during the daytime and returning to huddle together at night. The experienced pot hunter or trapper can get quantities, but, hunted in a legal and sportsmanlike way, it requires a lot of hard fast work to make a fair bag. No quail is more nimble of foot than these; they go through the mesquite and cactus with a speed few men can follow. Yet if one sits quietly down, he may often see numbers of them at close range, for unless they are being hunted they are far from wild.

They pair in February, at which time much vegetation is in bloom, and during March or early April sets of their eggs, numbering about a dozen, may be found in a slightly lined hollow beside a bunch of grass or under concealing bushes; they are buffy-white, with large spots of brown and lavender. The call of the male during the mating and breeding season is a shrill *cha-cha*.

CALIFORNIA QUAIL (*Lophortyx californica californica*). Of the same size, nearly 10 in. in length, as the last and differing as shown. The curved feathers forming the

handsome crest are ordinarily carried in a single packet, but they can be separated at will and thrown forward so that the first, or all of them, nearly touch the bill. These birds are locally abundant in the humid regions of the Pacific coast states. While they are shy when hunted persistently, they are very tame in parks where they are not molested.

MEARNS QUAIL (*Crytonyx montezumae mearnsi*), otherwise known as Massena Quail or "Fool Quail," this is the most strikingly marked bird of which I know. It is found in upper arid regions of Mexico and north to Arizona and western Texas.



DUSKY GROUSE (*Dendragapus obscurus obscurus*). With the exception of the Sage Grouse, this is the largest of American grouse, measuring about 20 in. in length and weighing about three pounds. This magnificent grouse is not uncommon in the Rocky Mountains from Arizona to northern Colorado. Another race, known as the Sooty Grouse, which differs chiefly in having a narrower tail band, is found from Alaska south to Oregon. Still another, Richardson Grouse, which shows scarcely any tail band, is found in the Rockies from Mackenzie to Oregon and Montana. All these birds are known to sportsmen as one, and are usually termed "Blue Grouse."

During winter they spend most of their time in the tops of immense firs and pines, feeding upon the buds and needles and only coming down early in the morning or at dusk to drink. Living as they do, in places where the trees are of gigantic size and set closely together, these birds are difficult to see, since their colors match the bark well and they sit motionless until they are pretty sure they are seen, when they will whirl away with a thunderous roar. As more than half the time the speeding bird is apt to be behind tree trunks, the chances of successful wing shots are not rosy.

Their eggs, laid in slight depressions alongside of logs or under bushes, are creamy-buff, spotted all over with brown.

CANADA SPRUCE PARTRIDGE (*Canachites canadensis canace*). A medium-sized grouse, measuring about 15 in. in length, feeding chiefly upon spruce buds, which impart a disagreeable taste to its flesh, on which account they are seldom shot and are usually exceedingly tame. They are sometimes caught in the hands and often caught with a noose on the end of a pole. This species, or some of the almost identical forms, is found in wooded regions of Canada and northern United States. Franklin Grouse, found in western Canada and northwestern United States, has scarcely any band on the end of the tail and the upper coverts are broadly banded with white.



DUSKY GROUSE
SPRUCE PARTRIDGE



RUFFED GROUSE

RUFFED GROUSE (*Bonasa umbellus umbellus*). From the sportsman's point of view these grouse are quite generally regarded as the king of American game birds. Of good size, measuring about 16 in. in length, they inhabit wooded districts where a quick eye and cool head are necessary to bring them down, especially since they start with a thunderous rush, that often proves the undoing of the novice, and speed swiftly away behind the sheltering tree trunks.

Several races of Ruffed Grouse are recognized, but the sportsman need concern himself with but one, since the chief differences are slight ones in the matter of size and shade of coloration. They are found throughout the northern half of the United States and the southern half of Canada in suitable wooded localities.

Sometimes a brood may remain together through the winter, but different broods never unite to form a flock as quail do. In spring the males daily resort to favorite logs or rocks and send forth their challenging drumming. This is produced by the bird standing erect, with tail spread and nearly horizontal, and rapidly fanning the wings forward in front of the breast, the beating of the air producing a thump, thump, that, increasing in velocity, soon assumes the sound of a loud rapid drumming. They also strut

about with head thrown back, ruff opened to form a complete collar and tail elevated over the back and spread to its fullest extent. Their nests are depressions in the leaves under the shelter of logs, stones or tree trunks; the eight to sixteen eggs are buff colored, unmarked. The little chicks follow their mother immediately after emerging from the eggs. If disturbed, at a warning call each chick hides among the leaves and the mother runs away, whining and trailing the wings as though badly wounded, in an effort to lead the intruder away from her little flock. This ruse usually works with people and it must almost infallibly pass if they are discovered by foxes or other predatory animals. Birds in unsettled portions of the north are not at all shy, are in fact almost as stupid as Spruce Partridge. Often called "Partridge" in the north and "Pheasant" in the south.

WILLOW PTARMIGAN (*Lagopus lagopus lagopus*). There are three distinct species of Ptarmigan or "Snow Grouse," several species not so well defined, and several, races of some of these species. The present species, or its varieties, inhabits the Arctic regions generally, in America breeding from southern Ungava, Keewatin and the Aleutian Islands northward, and in winter coming south to Ontario, Minnesota and British Columbia and casually to the New England States.

ROCK PTARMIGAN (*Lagopus rupestris rupestris*). Slightly smaller than the last, measuring a trifle more than a foot. The bill is considerably smaller comparatively, and in all stages of plumage there is a black spot in front of the eyes. This species is found in northern Canada from Ungava to Alaska where several similar races occur.

WHITE-TAILED PTARMIGAN (*Lagopus leucurus*) are still smaller and all the tail feathers are wholly white. These are found in the Rocky Mountains from New Mexico north to Alaska.

Ptarmigan are remarkable birds in that they are in an almost continual state of molting, nearly every month in the year showing them in different stages of plumage, ranging from the snow-white winter dress to the summer one in which reddish-brown prevails on Willow Ptarmigan and a black and gray barred effect predominates on the other species. Notice that they are feathered to the toes, in winter the feathers on the toes growing dense and hair-like, not only protecting the toes from the cold but making excellent snowshoes which enable them to walk with impunity over the lightest snow.

Ptarmigan form the staple article of diet for northern foxes, and were it not for the fact that their plumage changes to correspond to the appearance of the ground at the various seasons they would fare hardly indeed.

In spring the little red combs above the eyes of the males are swollen and conspicuous. At this season they strut and perform curious antics, such as all grouse are noted for.



WILLOW PTARMIGAN
ROCK PTARMIGAN



PRAIRIE HEN
HEATH HEN

PRAIRIE CHICKEN (*Tympanuchus americanus americanus*). Often known, too, as Prairie Hen and as "Pinnated Grouse." These are the game birds of the plains in the interior. They flock during the fall and winter months, lie well to dogs, frequent open, easily traversed country and above all their large size, 18 inches in length, and tender palatable flesh are a reward to the hunter in addition to the sport of capture. However, they do not require anywhere near the skill and quickness to secure that the Ruffed Grouse does. They are hunted on foot, on horseback, in carriages and even from automobiles, but always with dogs to locate the chickens and to put them up.

They frequent the plains of central North America from southern Canada south to Texas.

During the mating season the males perform the most ludicrous antics; assembling on a slight rise, they strut about with the pinnates elevated and the orange sacs beneath inflated until they look like little oranges and almost conceal the head which is drawn down between them; the short tail is spread fan-like over the back; from all sides come the deep booming notes sounding like the gathering of a lot of enormous bullfrogs. When they get worked up to the proper pitch, the fight for partners is on in earnest,

the feet, wings and bills being used with savage effect. The winners, of course, secure the belles, while the losers take what is left or go through the season as bachelors.

HEATH HEN (*Tympanuchus cupido*). This is the Prairie Chicken of the east, now confined to the island of Martha's Vineyard, but formerly ranging over southern New England and part of the Middle States. They are very little smaller than the last, the scapulars are broadly tipped with buff and the pinnates are pointed and less than ten in number.

LESSER-PRAIRIE CHICKEN (*Tympanuchus pallidicinctus*) is smaller and paler, and the bars on the back are brown with black edgings. Found on plains from Kansas to Texas.

SAGE HEN (*Centrocercus urophasianus*). This, the largest of American grouse, measuring about 28 in. in length and weighing up to 8 pounds, is found in western North America from British Columbia and Assiniboia to central California and Colorado.

The hen bird is considerably smaller than the cock, measuring but 23 in. in length.

These great birds inhabit the Great Basin and arid plains throughout their range, where sage is the prevailing brush. They are strictly terrestrial fowl, feeding almost wholly on sage leaves which impart a disagreeable taste to their flesh. They remain common only in regions remote from civilization, for their large bodies offer such an easy mark even though their flight be swift, that they soon become scarce after the country becomes settled.

Because of their great size, the actions of cock birds during mating season are even more ludicrous than those of other grouse. The air sacs on the neck are enormously inflated until the whole breast is balloon-shaped and then he slides along over the bare ground for some distance on this improvised pneumatic tire. While expelling the air, he produces a great variety of cackling and rumbling noises. At the end of this season the feathers on the breast are worn away by this constant friction with the ground, leaving only the stiff shafts at their ends.

WILD TURKEY (*Meleagris gallopavo silvestris*). Largest and finest of game birds and the originator of the common domestic turkey. Found in their several races in eastern and southern United States, north to Pennsylvania and west to Texas; formerly north to New England. Frequent wooded districts and are by nature very wary and shy, yet they are very easily trapped and it was this means that has driven them from most of their former range. At present they are taken chiefly by trailing or by calling. They have a remarkably keen sense of sight and smell and a strong pair of legs with which to run away, as well as good wings if necessity demands their use. With plenty of cover, the turkey is pretty capable of caring for himself.



SAGE HEN
WILD TURKEY



SHARP-TAILED GROUSE
RING-NECKED PHEASANT

RING-NECKED PHEASANT (*Phasianus torquatus*). These handsome birds have been introduced into various parts of our country and in some sections are thriving very well, notably so in Oregon and Washington and almost as well in New England. The male is an exceptionally beautiful bird, measuring about 36 in. in length, including the long tail. They inhabit cultivated or weed-grown fields and brush-covered side hills or pasture land. Sportsmen who use only the pointer or setter have quite unanimously voted Pheasants failures as game birds, but a well trained hound will furnish as much sport with them as can be secured from any bird. Some of my pleasantest days afield have been with a hound and without a gun. What more could one wish than to watch his faithful friend coursing all over the field, hot on the trail of the running cock pheasant and finally "standing" him in some thick cover. Some claim that it will spoil a dog if you do not occasionally shoot game he puts up, but I have found that words of appreciation of his good work go just as far as getting the game. Everyone has his own tastes and, as an article of food, I have yet to find any game equal to the Pheasant. It is very like quail but with the great advantage of good size.

Claims that Pheasants destroy young grouse I believe to be contrary to fact and spiteful, since the two species do not frequent the same covers, and I have had much experience with both during the breeding season.

PRAIRIE SHARP-TAILED GROUSE (*Pedioecetes phasianellus campestris*). The typical Sharp-tail is found from Central Alaska and British Columbia east to Ontario and western Ungava; the Columbian Sharp-tail inhabits the region from northeastern California and Colorado north to Alberta; and the present variety occurs from Illinois and Kansas north to Manitoba. The three varieties differ only slightly in the tone of coloring, and even more slightly in size, averaging on 16 in. in length. Unlike Prairie Chickens, these birds do not thrive on cultivated land, but advance ahead of the settlers and make their homes in more remote country.

INDEX

	PAGE		PAGE
Avocet.....	29	Eider.....	18
Baldpate.....	10	King.....	19
Beetlehead Plover.....	41	Pacific.....	18
Blue Peter.....	28	Spectacled.....	18
Blue-stocking.....	29	Fishing Duck.....	7
Bob-white.....	46	Gadwall.....	9
Bog-bird.....	30	Gallinule.....	28
Brant.....	24	Garrot.....	16
Black.....	24	Godwit, Hudsonian.....	36
Buffle-head.....	17	Marbled.....	36
Bull-head Plover.....	41	Golden-eye.....	16
Butter-ball.....	17	Barrow.....	16
Canvasback.....	14	Goosander.....	7
Chicken, Prairie.....	52	Goose, Blue.....	21
Coot.....	28	Cackling.....	23
Sea.....	19	Canada.....	23
Curlews.....	40	Emperor.....	22
Dipper Duck.....	17	Laughing.....	22
Dowitcher.....	31	White-fronted.....	22
Duck, Black.....	9	Greenhead.....	8
Blackhead.....	14	Grouse, Blue.....	49
Bluebill.....	14	Dusky.....	49
Broadbill.....	12	Pinnated.....	52
Canvasback.....	14	Ruffed.....	50
Dusky.....	9	Sage.....	53
Florida.....	9	Sharp-tailed.....	54
Harlequin.....	29	Snow.....	51
Labrador.....	17	Spruce.....	49
Long-tailed.....	17	Hairy-head.....	8
Mottled.....	9	Heath Hen.....	52
Pintail.....	12	Killdeer.....	42
Ring-necked.....	15	Knot.....	32
Ruddy.....	20	Mallard.....	8
Scap.....	14	Black.....	9
Steller.....	18	Marlin.....	36
Spoonbill.....	12	Merganser.....	7
Summer.....	13	Red-breasted.....	7
Wild.....	8	Hooded.....	8
Wood.....	13	Mud Hen.....	28
Dunlin.....	35		

INDEX

	PAGE		PAGE
Old-squaw.....	17	Sandpiper (<i>continued</i>)	
Ortolan.....	27	Purple.....	32
Partridge.....	50	Red-backed.....	35
Canada Spruce.....	49	Semi-palmated.....	35
Virginia.....	46	Solitary.....	38
Peeps.....	34	Stilt.....	31
Pheasant.....	50	Spotted.....	39
Ring-necked.....	54	White-rumped.....	34
Phalaropes.....	29	Sanderling.....	35
Pintail Duck.....	12	Scaup Duck.....	14
Plover, Black-bellied.....	41	Lesser.....	15
Golden.....	41	Scoter.....	19
Piping.....	43	Sheldrake.....	7
Mountain.....	44	Summer.....	8
Ring-necked.....	42	Shoveller.....	12
Semi-palmated.....	42	Snipe, Grass.....	33
Snowy.....	43	Jack.....	30
Upland.....	33	Red-breasted.....	31
Wilson.....	44	Robin.....	32
Prairie Hen.....	52	Wilson.....	30
Ptarmigan.....	51	Winter.....	32
Quail.....	46	Sora.....	27
California.....	48	South-southerly.....	17
Gambel.....	48	Spirit Duck.....	17
Mountain.....	47	Sprigtail.....	12
Scaled.....	47	Stilt.....	29
Mearns.....	48	Surf-bird.....	44
Raft Duck.....	14	Swan.....	25
Rail, Clapper.....	26	Teal, Blue-winged.....	11
King.....	26	Cinnamon.....	11
Sora.....	27	Green-winged.....	10
Virginia.....	27	Tell-tale.....	37
Redhead.....	13	Tip-up.....	39
Sage Hen.....	53	Turkey, Wild.....	53
Baird.....	34	Weazer.....	7
Sandpiper, Bartramian.....	33	Widgeon.....	10
Buff-breasted.....	39	Wild Duck.....	8
Least.....	34	Whistler.....	16
Pectoral.....	33	Willet.....	38
Pribilof.....	32	Woodcock.....	30
		Yellow-legs.....	37

GUIDE TO TAXIDERMY

BY C. K. AND C. A. REED

IS AN EXPERT, INTERESTING AND CONTINUAL
INSTRUCTOR

ILLUSTRATED

In this one book you get as much or *more value* than you can from \$50.00 worth of personal instruction or correspondence. You get half a dozen different courses at a fraction of the cost of one, and can take up the work as rapidly or as slowly as you like. *Two weeks' practice* during your spare time should easily *enable you to mount a bird excellently*.

Taxidermists charge from \$1.25 to \$15.00 for mounting a bird, and from \$2.50 to \$100.00 for animals. You can do this work yourself at the cost of but a few cents and a little of your spare time. Many professional taxidermists have but little idea of the appearance of a bird or animal and use crude methods of mounting. You can mount your specimen as you saw it in life and by the most approved method.

In the course of the year, you can pick up a great many dollars by doing work for your friends and sportsmen near you, or you can engage in taxidermy as a business. If you master the contents of this book you will be far better equipped for the business than are the majority of those now engaged in it.

Personal instruction, in only one branch of taxidermy, costs from \$15.00 up, while the price of GUIDE TO TAXIDERMY, which includes half a dozen full courses, is *only \$1.50 net; postpaid for \$1.65. 300 pages, cloth bound.*



LAND BIRDS

BY CHESTER A. REED, S.B.

An illustrated pocket text-book that enables anyone to quickly identify any song or insectivorous bird found east of the Rocky Mountains. It describes their habits and peculiarities; tells you where to look for them and describes their nests, eggs and songs.

EVERY BIRD IS SHOWN IN COLOR, including the females and young where the plumage differs, from water-color drawings by the 4-color process. The illustrations are the BEST, the MOST ACCURATE, and the MOST VALUABLE ever printed in a bird book.

“LAND BIRDS” is the most popular and has had the LARGEST SALE of any bird book published in this country. It is used and recommended by our leading Ornithologists and teachers. 230 pages.

Bound in Cloth, 75c. net; in Leather, \$1.00 net; postage, 5c.



WATER BIRDS

BY CHESTER A. REED, S.B.

This book is uniform in size and scope with "LAND BIRDS." It includes all of the Water Birds, Game Birds and Birds of Prey, east of the Rockies. Each species is ILLUSTRATED IN COLOR from oil paintings; the bird, its habits and nesting habits are described.

The pictures show more than 230 birds in color, every species found in our range. They exceed in number those in any other bird book. In quality they cannot be surpassed—exquisite gems, each with an attractive background typical of the habitat of the species.

"LAND BIRDS" and "WATER BIRDS" are the only books, regardless of price, that describe and show in color every bird. 250 pages, neatly boxed.

Bound in Cloth, \$1.00 net; in Leather, \$1.25 net; postage, 5c.



FLOWER GUIDE

BY CHESTER A. REED, S.B.

A guide to the common wild flowers found in the Eastern and Middle States.

“ Wild Flower Guide ” is the same size and scope as “ Bird Guide.” It has an extraordinary sale and has been adopted and used in quantities in many of our leading colleges and schools.

The COLORED ILLUSTRATIONS, 192 in number, are beautiful, artistic and accurate reproductions from oil paintings; the finest series ever made. The text tells where each is found, when it blooms, whether in woods, fields, swamps, etc., the height that the plant attains, whether it is self-fertilized or cross fertilized by insects and how; in fact it gives a great deal more information than one would think possible in a book to fit comfortably in the pocket.

Bound in Cloth, 75c.; in Leather, \$1.00; postage, 5c.

CAMERA STUDIES OF WILD BIRDS IN THEIR HOMES

By CHESTER A. REED, S.B.

Interesting text and 250 illustrations from actual photographs of living wild birds. Some of the finest ever made. 300 pages, $5\frac{1}{2} \times 7\frac{1}{2}$, cloth bound.

\$2.00 net; postage, 20c.

NORTH AMERICAN BIRDS' EGGS

By CHESTER A. REED, S.B.

This is the only book on the market that gives illustrations of the eggs of all North American birds. Each egg is shown FULL SIZED, photographed directly from an authentic and well-marked specimen. There are a great many full-page plates of nests and eggs in their natural situations.

The habitat and habits of each bird are given.

It is finely printed on the best of paper and handsomely bound in cloth. 350 pages—6 x 9 inches.

\$2.50 net; postage, 25c.

NATURE STUDIES—BIRDS

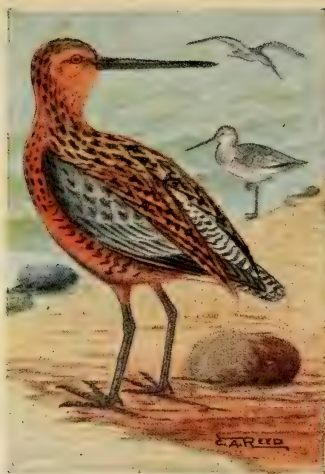
A book to start the young folks along the right paths in the study of birds. Interesting stories. 40 colored illustrations. 112 pages.

60c. net; postage, 10c.

NATURE STUDIES IN FIELD AND WOOD

A book to call attention to the many interesting creatures to be seen on every hand—in brook, pond, field, swamp, woods and even in the dooryard. 40 illustrations. 112 pages.

60c. net; postage, 10c.



Birds of Eastern North America

BY CHESTER A. REED, S.B.

THE BIRD BOOK of the year. It is authentic. The author KNOWS birds. He has studied them for thirty years—in the hand, for plumage, and in their haunts, for habits. He has studied them in their homes and has photographed hundreds as they were actually feeding their young. Besides being able to write about these things in an interesting and instructive manner, he is classed as one of the foremost bird artists in America. This rare combination of Artist-Author-Naturalist has produced, in "Birds of Eastern North America," the ultimate bird book.

The technical descriptions aided by the pictures give perfect ideas of the plumages of adults and young.

The descriptive text gives the important and characteristic features in the lives of the various species.

The illustrations—well, there are 408 PICTURES IN NATURAL COLORS; they show practically every species, including male, female and young when the plumages differ, and they are perfectly made by the best process. No other one bird book ever had anywhere near as many accurately colored pictures.

Bound in cloth, handsomely illuminated in gold; 464 pages ($4\frac{1}{2} \times 6\frac{1}{2}$); 408 colored illustrations; every bird described and pictured.

\$3.00 net; postage 15c.

CHAS. K. REED, Worcester, Mass.



WILD FLOWERS

East of the Rockies

By CHESTER A. REED

The latest flower book.

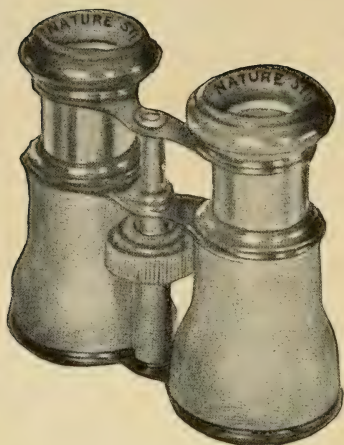
In a class by itself.

Original, beautiful, compact, complete, interesting, exact.

Pictures 320 flowers, ALL IN COLOR.

450 pages.

Handsomely bound; boxed. \$2.50 net; postage 15c.



Field Glasses for Bird Study

or equally good for the mountains, seashore or theater, or wherever a large, clear image of an object is desired.

We carefully examined more than a hundred makes of field glasses, to select the ones best adapted for bird study.

We found one make that was superior to any other of the same price and equal optically, and nearly as well made as those costing three times as much.

They magnify about three diameters, and have an unusually large field of vision or angle of view, making it easy to find a bird or keep him in sight. Price only \$5.00 postpaid.

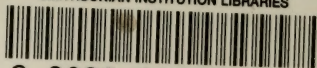
CHAS. K. REED - - Worcester, Mass.







SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00084 2955

